

Remarks

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. Claims 1, 6 and 11 have been amended. No claims have been added or canceled. Thus, claims 1-15 are pending.

CLAIM REJECTIONS – 35 U.S.C. § 103(a) - *Tahara*

Claims 1-4 and 11-14 were rejected as being unpatentable over U.S. Patent No. 5,657,086 issued to Tahara, et al. (*Tahara*). For at least the reasons set forth below, Applicants submit that claims 1-4 and 11-14 are not rendered obvious by *Tahara*.

Claim 1 recites:

performing a first encoding transformation on a set of data representing a video frame as frame-based data to generate an array of frame-based coefficient data including chrominance data and a first representation of luminance data;

performing a second encoding transformation on the set of data representing the video frame as field-based data to generate an array of field-based coefficient data including chrominance data and a second representation of the luminance data...

Similarly, claim 11 recites:

means for performing a first encoding transformation on a set of data representing a video frame as frame-based data to generate an array of frame-based coefficient data including chrominance data and a first representation of luminance data;

means for performing a second encoding transformation on the set of data representing the video frame as field-based data to generate an array of field-based coefficient data including chrominance data and a second representation of the luminance data...

Thus, Applicants claim performing both frame-based transformation and field-based transformation of a video frame. The frame-based transformation and the field-based

transformation are performed on the chrominance data. A frame-based transformation is performed on a first representation of luminance data and a field-based transformation is performed on a second representation of the luminance data. Either the frame-based transformation or the field-based transformation is selected based, at least in part, on the number of non-zero coefficients in the frame-based transformation and the field-based transformation.

Tahara discloses determining a frame weight (Eqn. 3, col. 17) and a field weight (Eqn. 4, col. 17) corresponding to a subset of luminance data for a video frame. See col. 17, lines 16-17 and 36-37. The weight values are a summation of coefficient values. These weight values are compared to a threshold value (TH_1) to determine whether frame encoding or field encoding should be used. See col. 17, lines 47-62. Alternatively, the frame weight and the field weight may be compared. See col. 17, line 63 to col. 18, line 5. Either way, the comparison is based on a summation of coefficient values and not a number of non-zero coefficients.

Thus, *Tahara* discloses analyzing only luminance data in the selection of whether frame-based or field-based encoding should be used. Further, *Tahara* discloses use of a summation of coefficients. Accordingly, Applicants submit that the disclosure of *Tahara* is substantially different from, and cannot suggest, the transformation of luminance and chrominance values and the analysis of the number of non-zero coefficients in selecting between frame-based or field-based encoding.

The Office Action attempts to cure the evaluation of the number of non-zero coefficients by stating that in video compression high frequency coefficients tend to be zero. See page 3. Whether or not this characterization is accurate, it is inconsistent with

Tahara, which teaches summation of coefficient values. The characterization set forth in the Office Action can only be accomplished in hindsight using the claims as a guide and are not supported by any of the cited references. Accordingly, Applicants submit that it is improper and should be withdrawn. For the various reasons set forth above, Applicants submit that *Tahara* cannot render the claimed invention obvious.

Claims 2-4 depend from claim 1. Claims 12-14 depend from claim 11. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 2-4 and 12-14 are not rendered obvious by *Tahara* for at least the reasons set forth above.

CLAIM REJECTIONS – 35 U.S.C. § 103(a) – *Tahara & Iizuka*

Claims 5 and 15 were rejected as being unpatentable over *Tahara* in view of U.S. Patent No. 5,767,910 issued to Iizuka (*Iizuka*). Claims 5 and 15 depend from claims 1 and 11, which have been discussed above. *Iizuka* is cited to teach zig-zag conversion. However, whether or not *Iizuka* discloses zig-zag conversion, *Iizuka* does not cure the deficiencies of *Tahara* set forth above. Accordingly, no combination of *Tahara* and *Iizuka* can teach or suggest the invention as claimed in claims 5 and 15.

CLAIM REJECTIONS – 35 U.S.C. § 103(a) – *Tahara & Hall*

Claims 6-9 were rejected as being unpatentable over *Tahara* in view of U.S. Patent No. 5,737,020 issued to Hall, et al. (*Hall*). For at least the reasons set forth below, Applicants submit that claims 6-9 are not rendered obvious by *Tahara* and *Hall*.

As discussed above, *Tahara* cannot teach or suggest the invention as claimed in claim 1. Thus, even if *Hall* discloses an article of manufacture as claimed and the

combination is proper, the resulting combination cannot teach or suggest the invention as claimed. Therefore, no combination of *Tahara* and *Hall* can teach or suggest the invention as claimed in claims 6-9.

CLAIM REJECTIONS – 35 U.S.C. § 103(a) – *Tahara, Hall & Iizuka*

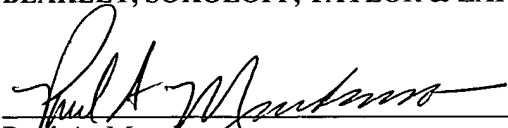
Claim 10 was rejected as being unpatentable over *Tahara* in view of *Hall* and further in view of *Iizuka*. As discussed above, *Tahara* does not teach or suggest the invention as claimed in claim 1. Therefore, no combination of *Tahara, Iizuka* and *Hall* can teach or suggest the invention as claimed in claim 10.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1-15 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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